

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Siegenthaler, Peter**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-019416**Date Inspected:** 14-Jan-2011**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1900**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Mr. An Qing xiang**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** Orthotropic Box Girder(OBG)**Summary of Items Observed:**

This CALTRANS OSM Quality Assurance Inspector (QA) Surendra Prabhu was present during the times noted above for observations relative to the fabrication of the Self Anchored Suspension (SAS) Superstructure being performed by Zhenhua Port Machinery Company (ZPMC) at Changxing Island, in Shanghai, China. QA observed and/or found the following:

OBG Assembly Bay- 14.

The following Non Destructive Testing (NDT) Inspection was carried out as per the ZPMC submitted Notification No. 08164.

Magnetic Particle Testing (MT)

This QA performed MT of approximately 15% of the area previously tested and accepted by ZPMC Quality Control (QC) personnel. This QA generated a MT report for this date. The members are identified as OBG weld Components. Total number of welds MT Tested: 12 No's. The weld designations inspected were as follows:

1. SEG3013B-214,207
2. SEG3013D-166,167,161,162,170,165
3. SEG3013AU-056,055,059
4. SEG3013AU-060.

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During QA MT review of welds located on Orthotropic Box Girder (OBG) Lift 13AW, this QA observed One Longitudinal Linear toe crack measuring approximately 40 mm in length. The weld is identified as: SEG3013AU-060. The weld is designated as Fracture Critical Weld (FCW). This weld is a Partial Joint Penetration (PJP) with reinforcement fillet weld joining bottom plate (SA3168A) to Stiffener plate (RS3479A). The “Y” location is approximately 410mm East side of the weld termination. The “Y” location measured from Panel Point no.119.65 Floor beam identified as FB3194A (as shown on picture below). The bottom plate and stiffener plate thickness is 100 mm and 45 mm respectively.

This QA generated an incident report on this date for the above issue, for further information see the incident report and attached photos.

This QA Inspector randomly observed the following work in progress:

Flux Cored Arc Welding (FCAW) welding of weld joint identified as SEG3020BB-008,082. Welder is identified as 067949. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC personnel appeared to comply with WPS:WPS-B-T-2132-ESAB.

FCAW welding of weld joint identified as SEG3020BB-062,088. Welder is identified as 066695. ZPMC Quality Control (QC) is identified as Mr. Zhulin. The welding variables recorded by QC personnel appeared to comply with WPS:WPS- B-T-2132-ESAB.

Shielded Metal Arc welding (SMAW) welding of weld joint identified as SEG3020AG-064. Welder is identified as 067942. ZPMC Quality Control (QC) is identified as Mr. Sun tian liang. The welding variables recorded by QC personnel appeared to comply with WPS: WPS-B-P-2214-TC-U4b-FCM-1.

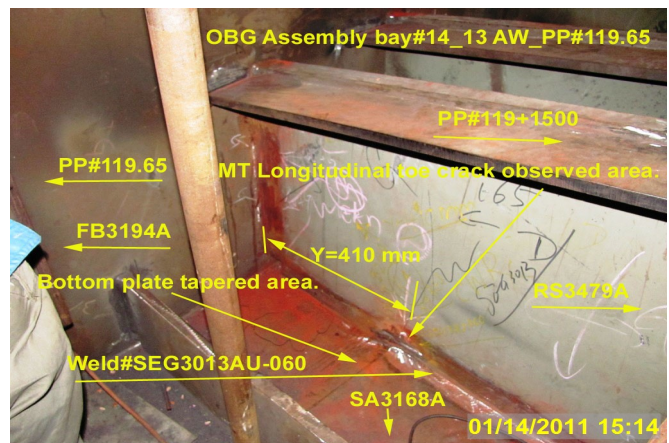
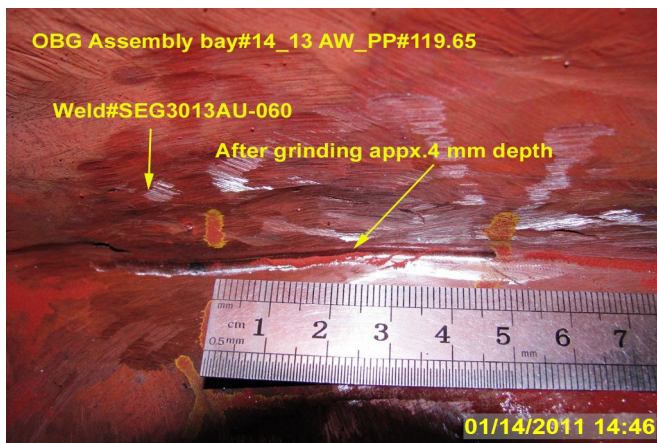
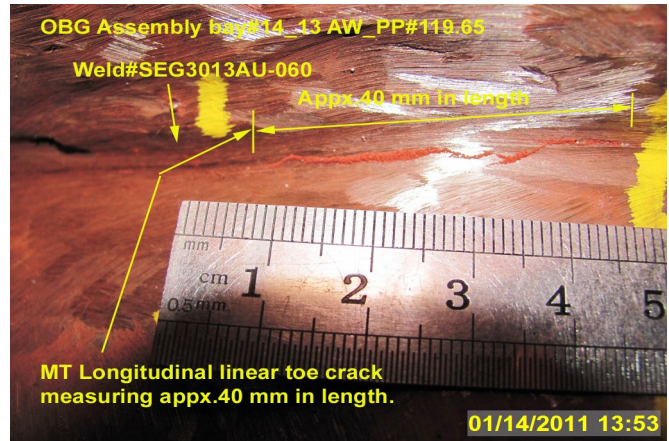
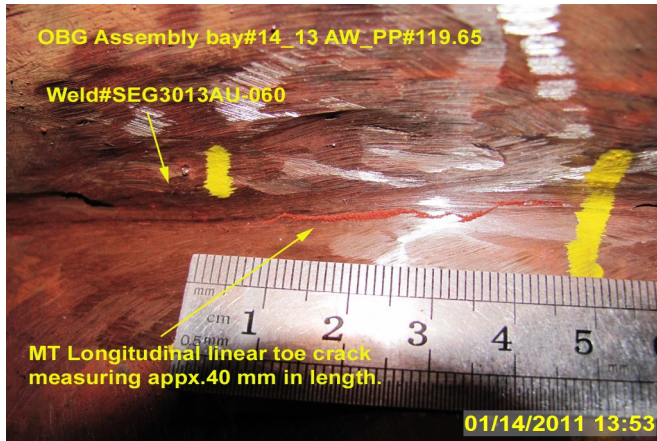
SMAW welding of weld joint identified as SEG3020AL-028. Welder is identified as 066038. ZPMC Quality Control (QC) is identified as Mr. Sun tian liang. The welding variables recorded by QC personnel appeared to comply with WPS: WPS-B-P-2214-TC-U4b-FCM-1.

SMAW Repair welding of weld joint identified as SEG3013E-044. Welder is identified as 066398. ZPMC Quality Control (QC) is identified as Mr. Sun tian liang. The welding variables recorded by QC personnel observed appeared to comply with WPS: WPS-345-SMAW-3G (3F)-FCM-Repair. The repair welding was being performed as per the Critical Welding Repair Report (CWR) No: B-CWR2735. This weld was previously rejected by ZPMC UT Technicians and recorded on UT Report no.B787-UT-18547.

Unless otherwise noted, all work observed on this date appeared to generally comply with applicable contract documents.

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Summary of Conversations:

No significant conversations were reported on this date.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Eric Tsang 15000422372, who represents the Office of Structural Materials for your project.

Inspected By: Prabhu,Surendra

Quality Assurance Inspector

Reviewed By: Peterson,Art

QA Reviewer